

REMARKS

**Status of the Claims**

Claim 1 is amended. Entry of the present Amendment is respectfully requested. Reexamination and reconsideration of the application, as amended, is requested. Claims 11-15 are added, no new matter is added. Claims 2, 5 – 7, 9 and 10 were cancelled, without prejudice or disclaimer.

**Claim Rejection 35 USC 102**

Claims 1, 3, 4 and 8 are rejected under 35 U.S.C. § 102 (b) as being anticipated by Hughey et al. (U.S. Patent No. 6,596,945 B1; hereinafter Hughey et al.). This rejection is respectfully traversed.

Claim 1 recites, among other features, any volume between the first superconducting layer and said electrical insulating layer is free of the normal conducting metal layer.

Hughey et al. fails to teach or suggest at least the above recited feature. In particular, Hughey et al. discloses a second normal conducting layer (45) located between the first superconducting layer (43) and the dielectric layer (46). Thus the volume between the first superconducting layer and electric insulating layer in Hughey et al. is not free of a normal conducting metal layer. The Office Action of January 28, 2008 acknowledges the above facts regarding Hughey et al. on page 3, lines 2 – 7.

The structure as disclosed in Fig. 3 of Hughey et al. allows current to flow more easily through shield layer 45 than superconductive tape 43, because in a cable core an inner layer has greater inductance. The current flow through shield layer 45 can lead to undesirable large AC losses.

Accordingly, embodiments of the current invention are free of a normal conducting metal layer between the first superconducting layer 3 and electric insulating layer 4. Thus current will flow through the first superconducting layer 3, reducing AC losses.

Thus, Hughey et al. fail to teach or suggest the subject matter recited in claim 1. Therefore claim 1 is not anticipated by Hughey et al. and is believed to be allowable. Claims 3, 4 and 8 depend directly or indirectly from claim 1, they are believed to be allowable for at least the same reasons claim 1 is believed to be allowable.

### **New Claims**

Claims 11 – 15 further distinguish embodiments of the current invention from Hughey et al. In particular, Claim 11 recites, among other features, a normal-conducting metal layer is formed between said electric insulating layer and in contact with said second superconducting layer.

Hughey et al. fails to disclose a normal-conducting layer in contact with said second superconducting layer. Specifically, Fig. 3 of Hughey et al. discloses a normal conducting layer (47), a semiconductive tape (48) on top of the normal conducting layer (47) and a second superconducting layer (49) on top of the semiconductive tape (48). Since the semiconductive tape is located between the second superconductive layer (49) and the normal conducting layer, the normal conducting layer is not in contact with the superconducting layer.

Thus, Hughey et al. fail to teach or suggest the subject matter recited in Claim 1. Therefore claim 11 is not anticipated by Hughey et al. and is believed to be allowable. Claims 12 – 15 depend directly or indirectly from claim 1, they are believed to be allowable for at least the same reasons claim 11 is believed to be allowable.

### **Concluding Remarks:**

After amending the claims as set forth above, Claims 1, 3, 4, 8 and 11 – 15 are now pending in this application. Applicants believe that the present application is in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

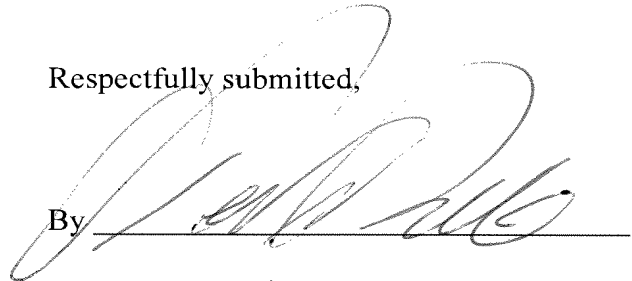
The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check or credit card payment form being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date

3-27-08

By



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